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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,036	03/22/2004	Hongmin Zhang	BMX-003.02	9982

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FOLEY HOAG, LLP
PATENT GROUP, WORLD TRADE CENTER WEST
155 SEAPORT BLVD
BOSTON, MA 02110

EXAMINER	
BERNSHTEYN, MICHAEL	
ART UNIT	**PAPER NUMBER**
1713	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,036	ZHANG ET AL.	
	Examiner	Art Unit	
	Michael Bernshteyn	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28-77,80--84* is/are pending in the application.

4a) Of the above claim(s) *28-62,77 and 80-82* is/are withdrawn from consideration.

5)☒ Claim(s) *83 and 84* is/are allowed.

6)☒ Claim(s) *63-76* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *28-77,80--84* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03/22/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *08/13/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 28-44 and 79, drawn to a polymer, comprising a monomer represented by 1, classified in class 526, subclass 301;

   II. Claims 45-58 and 80, drawn to a polymer, comprising a monomer represented by 2, classified in class 526, subclass 347;

   III. Claims 59-62, 81 and 82, drawn to a crosslinked gel, comprising a hydrophobic polymer, classified in class 516, subclass 99;

   IV. Claims 63-76, 83 and 84, drawn to a crosslinked gel, comprising a hydrophilic polymer, classified in class 514, subclass 54.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and III, II and IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as the polymers, comprising the different monomers represented by 1 and 2 for producing hydrophobic and hydrophilic crosslinked polymer gels, and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record

showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Inventions of Groups I and II, I and IV, II and III, III and IV and are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, for example, the polymer, comprising a monomer represented by 1, and the polymer, comprising a monomer represented by 2, or the crosslinked gel, comprising a hydrophobic polymer and the crosslinked gel, comprising a hydrophilic polymer are completely different inventions because they have different functions and different effect and can be used separately.

4. Because these inventions are distinct for the reason given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reason given above and the search required for Group IV is not required for Groups I-III, restriction for examination purposes as indicated is proper.

6. Should the applicants elect the invention of Group IV for examination on the merits, the following election requirement applies. This application contains claims directed to the following patentably distinct species of the claimed invention:

a) the crosslinked gel, comprising a hydrophilic polymer disclosed by claim 65, wherein the species of the hydrophilic polymer are acrylic acid, 2-hydroxyethyl acrylate, etc.;

b) the crosslinked gel disclosed by claim 72, wherein the species of the acrylate are acrylic acid, 2-hydroxyethyl acrylate, etc.;

b) the crosslinked gel disclosed by claim 75, wherein the species of the first acrylate are acrylic acid, 2-hydroxyethyl acrylate, etc.;

b) the crosslinked gel disclosed by claim 76, wherein the species of the first acrylate are acrylic acid, 2-hydroxyethyl acrylate, etc., and the species of the second acrylate are acrylic acid, 2-hydroxyethyl acrylate, etc.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 63, 83 and 84 are generic.

Applicant is required under 35 U.S.C. 121 to elect a single ultimate disclosed specie for each of the above genera for the prosecution on the merits to which claims shall be restricted if no generic claim is finally held allowance. Where the specific species are not identified in the claims, an applicant should elect specific specie from the specification. An alternative method of election is to identify an example, which collectively exemplifies the elected species.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. During a telephone conversation with Mr. Dana M. Gordon (Registration No. 44,719) on January 30, 2006 a provisional election was made without traverse to prosecute the invention of Group IV, claims 63-76, 83, 84 and the specie for the claims 65, 72, 75 is 2-hydroxyethyl acrylate, and the species for the claim 76 are 2-hydroxyethyl acrylate and acrylic acid. Affirmation of this election must be made by applicant in replying to this office action. Claims 28-62 and 79-82 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

8. Claims 63-76, 83 and 84 are active in the Application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 63-76 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 63 is depended upon any of claims 1-27, which were canceled without prejudice. Applicant is required to amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Allowable Subject Matter

10. Claims 83 and 84 are allowed.

11. The following is an examiner's statement of reason for allowance:

The present claims are allowable over the closest references: Ulbrinch et al. (U. S. Patent 5,124,421) and Brooks et al. (4,160,077).

Ulbrinch discloses the method for preparation of the hydrolytically degradable gels consists in subjecting hydrophilic monomers or their mixture to the radical polymerization or copolymerization, or to copolymerization with hydrophobic monomers, in the presence of a new compound--**N,O-dimethacryloylhydroxylamine**--as a crosslinking agent, and, if desired, in the presence of a solvent, whereas the amount of hydrophilic monomers is 50 to 99.8 molar percent related to all monomers present (abstract, col1, lines 56-63). As the hydrophilic monomers for the preparation of

hydrolytically degradable polymeric gels according to the invention, they can be advantageously used the monomers selected from the group comprising N-(2-hydroxypropyl)methacrylamide, N-isopropylacrylamide, N,N'-diethylacrylamide, N-ethylmethacrylamide, 2-hydroxyethyl methacrylate, 2-(2-hydroxyethoxy)ethyl methacrylate, acrylic acid, methacrylic acid, and others. The hydrophilic monomers can be used in the crosslinking homopolymerization in the amount of 90 to 99.8 weight percent of the polymerization mixture and, in the copolymerization with hydrophobic comonomers, in the amount of 50 to 99 molar percent related to all monomers in the polymerization mixture (col. 1, line 56 through col. 2, line 8).

Ulbrinch does not disclose the instantly claimed mono-, bis- and higher N,O-diacylated hydroxylamines and methods for their preparing. Therefore the instantly claimed methods for the preparation of such compounds are patentable over teachings of Unbrich.

Brooks discloses a process for the cross-linking or chain extension of hycrocarbon polymers, which contain ethylenically unsaturated groups, which comprises forming an intimate mixture of the polymer with a carbamate (abstract).

Brooks discloses N,O-diacylated hydroxylamines and their use in crosslinking unsaturated hydrocarbon polymers. Brooks does not disclose the instant variable group Q. Therefore, the instantly claimed methods for the preparation of claimed compounds are patentable over teachings of Brooks.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Bernshteyn
Patent Examiner
Art Unit 1713

MB
02/15/2006

DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700